STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-102800.01 (LTF # 61150, Place ID 6795)
RAINBOW VALLEY TOPSOIL AND LANDFILL

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3; Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2; A A.C. Title 18, Chapter 11, Article 4; and amendments thereto; and the conditions set forth in this permit, Glenn Weinberger Topsoil, Inc., (GWT) is hereby authorized to operate the Rainbow Valley Topsoil and Landfill facility located at 39500 South 99th Avenue, Mobile, Arizona, over groundwater of the Phoenix Active Management Area in the East Half of Section 8, Township 4 South, Range 1 East of the Gila and Salt River Base Line and Meridian.

This permit amendment becomes effective on the date of the Waste Program Division Director's signature and shall be valid for the life of the facility (closure and post-closure care periods), unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below, or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant, and as determined at the applicable POC, occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name:	Rainbow Valley Topsoil and Landfill
Facility Address:	39500 South 99th Avenue, Mobile, Arizona 85139
Facility Contact:	Glenn Weinberger, President (602) 278-9155
Permittee as Owner:	Glenn Weinberger Topsoil, Inc.
Corporate Address:	3425 South 43rd Avenue, AZ 85009
Permittee as Operator:	Glenn Weinberger Topsoil, Inc.
Corporate Address:	3425 South 43rd Avenue, AZ 85009
Latitude:	33° 05' 38" North
Longitude:	112° 16' 30" West

1.2 AUTHORIZING SIGNATURE

_____

Laura L. Malone, Director
Waste Programs Division

Signed this _____day of _____, 2015

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(A)(4), 49-241(A)]

This Aquifer Protection Permit (APP) is issued to update owner and operator name, financial assurance mechanisms, closure and post-closure plans and cost estimates, lateral expansion of the landfill (parcel acquisitions), vertical expansion of the landfill, acceptance of waste materials similar to waste soil, reinstatement of groundwater monitoring, and replacement of existing scale house/office and adding a truck scale in accordance with the *Significant Amendment, Solid Waste Facility Plan, Aquifer Protection Permit No. P-102800, Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Maricopa County, Arizona*, by AMTECH Associates, L.L.C., dated August 28, 2014, and supplemental documents dated October 16 and December 1, 2014, and February 17, April 24, and August 4, 2015 *(SASWFP)*. This APP also incorporates previous approvals issued by ADEQ.

Rainbow Valley Topsoil and Landfill *(RVTL)* is a construction and demolition debris landfill that utilizes a compacted clay liner system and has been in operation since September 1999 (58.5 acres utilized as of October 2014). This approval incorporates the addition of two (2), twenty (20) acre parcels and abandoned right-of-way areas increasing the total property area from 276 acres to 316 acres. The approval of the significant amendment increases the landfill waste footprint from 231 acres to 246 acres. In areas that have yet to be constructed, the landfill's depth will increase from 60 feet below ground surface (bgs) to 80 feet bgs, as set forth in *Drawing 3* of the *Addendum No. 4 to the Significant Amendment to the Solid Waste Facility Plan*, as referenced in Section 5. The landfill's height increases from 60 feet above ground surface (ags) to 250 feet ags, with a maximum height of approximately 1,506 feet above mean sea level (amsl), as shown in *Drawing 4* of the *8/4/2015 Addendum No. 4.* The landfill side slopes shall be three horizontal to one vertical (3H:1V) with drainage benches constructed every 40 feet of landfill elevation, as depicted in *Drawing 4* of the *8/4/2015 Addendum No. 4.*

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

The site includes the following permitted discharging facility:

Facility	Latitude	Longitude
Rainbow Valley Topsoil and Landfill	33° 05' 38" North	112° 16' 30" West

2.1.1 Annual Registration and Disposal Fees [A.A.C. R18-13-2102 and A.R.S. § 49-836]

The annual registration fee for this permit is established by A.A.C. R18-13-2102 and the solid waste landfill disposal fees are established by A.R.S. § 49-836 based on the amount of waste landfilled. The fees are payable to ADEQ each year.

2.1.2 Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee must demonstrate financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee shall maintain financial capability throughout the 30-year post-closure care of the facility. The estimated cost for closure and post-closure care, as of February 17, 2015, is $947,977.70 ($458,677.70 for closure and $489,300.00 for post-closure). The financial capability was demonstrated through a performance surety bond, two (2) letters of credit, and the financial test for self-assurance.

2.1.3 Periodic Update of Post-Closure Cost Estimate [A.R.S. § 49-243(N)(2)(a)]

For the duration of the permit, the cost estimate shall be updated every five (5) years to adjust for inflation or as necessary to reflect increased costs resulting from changes to the facility or to the facility closure strategy or plan, or to any other relevant conditions related to the facility.

2.1.4 Periodic Demonstration of Responsibility and Reporting [A.R.S. § 49-243(N)(4)]

The permittee shall maintain its demonstration of financial responsibility prescribed in this subsection for the duration of the permit. The permittee shall demonstrate financial responsibility by reporting the status of the financial assurance mechanism with documentation every five (5) years.

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

BADCT for the RVTL consists of a bottom liner system, storm water management structures, and a final cover system to be installed during closure.

2.2.1 Engineering Design

1. The bottom liner system shall consist of on-site native soil material, from top to bottom, as specified in the *Minor Modification*, dated March 31, 1999, and *8/4/2015 Addendum No. 4*, as referenced in Section 5.0 as follows:

    a. 24-inch operations layer, with a hydraulic conductivity of 1×10^{-5} cm/sec of less;

    b. 12-inch scarified and recompacted soil base layer, with a compaction quality of at least 95%, maximum dry density, and hydraulic conductivity of less than or equal to 1×10^{-6} cm/sec; and

    c. 12-inch native soil layer, with a hydraulic conductivity no greater than 1×10^{-5} cm/sec.

    The liner provides a barrier to downward infiltration of leachate as demonstrated by HELP modeling in the *12/1/2014 Significant Amendment* and the *2/17/2015 Addendum No. 2*.

2. RVTL excavation grades shall be constructed as shown on *Drawing 3* of the *8/4/2015 Addendum No. 4* with a maximum excavation depth at elevation of 1,159 feet amsl, as shown on *Drawings 6 and 6A* of the *8/4/2015 Addendum No. 4.*

3. RVTL final cover slopes shall be approximately 3:1 (horizontal:vertical). Drainage benches, a minimum of 20 feet wide, shall be constructed for every 40-foot increase in elevation, as shown on *Drawing 4 of* the *8/4/2015 Addendum No. 4.*

4. The final perimeter drainage channel and detention basin shall be constructed in accordance with *Drawing 2 of* the *8/4/2015 Addendum No. 4* so that post-development flows leaving the site are less than pre-development flows on the 100-year, 6-hour storm. The detention basin shall drain in 24 to 36 hours via a drain pipe to the Waterman Wash with the lower 1.25 feet of basin retained. On-site flows along the south and west shall be collected by a berm/ditch and routed to the northwest corner of the site.

5. The final cover shall consist of 30 inches of on-site or imported earthen material, constructed as follows, from bottom to top:

    a. A minimum of six (6) inches of a daily/intermediate cover soil (not counted as part of the 30-inch final cover).

b. A minimum eighteen (18)-inch thick compacted soil layer with a hydraulic conductivity of 1×10^{-5} cm/sec, or less.

c. A twelve (12)-inch thick erosion layer designed to minimize erosion, and capable of sustaining native plant growth.

d. The final maximum height of RVTL shall not exceed 1,506 feet msl as shown on *Drawing 4* of the *8/4/2015 Addendum No. 4.*

e. Any changes to the approved final cover system shall be approved in writing by ADEQ prior to implementation of the changes.

2.2.2 Site-specific Characteristics

Not applicable.

2.2.3 Pre-Operational Requirements

The permittee shall submit the construction certification, as described in Section 2.2.5 of this permit, for any new landfill cell prior to beginning operation of the cell.

2.2.4 Operational Requirements

1. The facility shall be constructed, operated, and maintained in a manner that will protect public health, safety, and the environment as set forth in the *Facility Operations Plan, Rainbow Valley Topsoil and Landfill* (FOP), dated May 18, 1999, prepared by Scott, Allard, & Bohannan, Inc., as referenced in Section 5.0. This includes maintenance of the structures, equipment, training employees, controlling facility access, posting appropriate signage, implementing health and safety programs, regular updates of the safety programs, methane gas and groundwater monitoring and record keeping. If any damage is identified during an inspection that could cause or contribute to a discharge, proper repairs shall be performed immediately as referenced in Section 4.2.

2. The permittee is allowed to accept the following wastes at RVTL:

   a. Construction and demolition debris as defined in A.R.S. §§ 49-701(5) and 701(7), respectively.

   b. Landscape rubble as defined in A.R.S. §§ 49-701(17).

   c. Vegetative waste as defined in A.R.S. §§ 49-701(36).

   d. Inert material as defined in A.R.S. §§ 49-701(15).

   e. Glass.

   f. Metal.

   g. Non-friable asbestos-containing material (ACM). In the event non-friable ACM becomes regulated ACM (RACM), the handling and disposal shall be conducted in accordance with 40 CFR § 61.154. RACM is defined as friable asbestos material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part

763, Section 1, Polarized Light Microscopy or when dry can be crumbled, pulverized or reduced to powder by hand pressure.

h. Storage of used motor vehicle tires.

i. Disposal of cut-up tires in the tire monofill.

j. Solid waste petroleum contaminated soils (PCS) and materials similar to waste soils that are non-hazardous, including materials derived from soil, rock, and mineral combinations, such as spent materials from sandblasting, directional drill mud, and spent materials from water jet cuttings, and other non-hazardous, non-putrescible and non-special waste materials.

3. The general operating requirements are set forth as follows:

a. Waste stream inspection and processing shall be conducted in accordance with the *FOP*.

b. Disposed waste shall be covered with six (6) inches of earthen material at the end of each operating day or more frequently as necessary to control disease vectors, fires, odors, blowing litter and scavenging.

2.2.5 Construction Requirements

A third-party Arizona registered professional engineer (QAE) shall be responsible for construction quality assurance (CQA) and construction quality control (CQC) work for any construction. The QAE shall be an Arizona registered, professional engineer and shall be responsible for reporting, inspecting, collecting and interpreting field and laboratory results.

The QAE shall certify that all construction, including excavation, soil segregation, sub-grade preparation, final cover layer construction, surface water drainage structures, and any other construction or installation work, is performed according to the SASWFP, the *Quality Assurance Manual for Construction of Alternative Final Cover and Liner Systems* (EMCON, 1999), manufacturer's specifications, engineering testing standards and/or the federal, state, or local regulations that may apply to the work.

The permittee shall submit the construction certification to and receive approval from the ADEQ Permits and Plan Review Unit prior to beginning of operation of any new cell.

2.2.6 Closure/Post-Closure Requirements

The final cover, surface water drainage structures and erosion control features shall be constructed and maintained as outlined in the SASWFP. The permittee shall maintain the facility in manner that will protect public health, safety, and the environment. This includes maintenance of cover, storm water drainage structures, erosion control features, controlled facility access, appropriate signage, landfill gas and groundwater monitoring and recordkeeping. If any damage is identified during an inspection that could cause or contribute to a discharge, proper repairs shall be performed immediately.

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243, and A.A.C. R18-9-A205(B)]

Discharges shall be controlled by the construction of a final cover system and construction of surface water diversion structures. No numerical discharge limits are set in this permit.

2.4 Point of Compliance [A.R.S. § 49-244]

The points of compliance (POC) are established by the following monitoring locations:

POC Location	Latitude	Longitude	Status
AW-1	33° 05' 26"	112° 16' 46"	Existing Well
AW-2	33° 05' 44"	112° 16' 46"	Approved location for future well
AW-3	33° 06' 02"	112° 16' 46"	Approved location for future well

The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1) and (K)(6), A.A.C. R18-9-A206 and R18-9-A209(C)]

The permittee shall continue all monitoring required in this permit for the duration of the permit, regardless of the status of the facility. All sampling, preservation, and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained; and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and Title 40 of the Code of Federal Regulations (40 CFR) Part 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

The following information associated with each sample, inspection, or measurement should be included in the monitoring records:

1. Name of each individual who performed the sampling, inspection, or measurement;
2. Date, time, and exact location of sampling, inspection, or measurement;
3. Date on which the sampling analysis was completed;
4. Name of each individual and laboratory who performed the analysis;
5. Analytical techniques or methods used to perform the sampling and analysis; laboratory detection limit for each test method performed, and analytical variance for each parameter analyzed;
6. Chain of custody records; and
7. Any field notes relating to information described in items 1 through 6, above.

2.5.1 Discharge Monitoring

Not applicable.

2.5.2 Facility / Operational Monitoring

2.5.2.1 Methane Gas Monitoring – Operational and Closure / Post-Closure

1. Routine methane gas monitoring shall be conducted quarterly during the operational lifetime and post-closure period of the RVTL. The Director may allow the frequency of the post-closure monitoring program to be decreased to a semiannual or annual basis.

2. Methane gas monitoring shall be conducted in accordance with the FOP.

3. The permittee shall operate and maintain methane gas monitoring equipment to ensure that the standards of 40 CFR § 257.3-8 are met. Such routine methane monitoring shall include monitoring gas probes GW-1 through GW-14 which are installed along the perimeter of RVTL as shown on *Drawing Nos. 3, 4 and 5 Rainbow Valley Landfill*, of the *8/4/2015 Addendum No. 4.* A landfill gas remediation system or other control mechanism may be designed and submitted to ADEQ if methane concentrations are detected above the levels indicated in Section 2.5.2.1(4) of this permit.

4. The permittee must ensure, in accordance with 40 CFR § 257.3-8, that the concentration of methane gas does not exceed:

    a. Twenty-five percent (25%) of the lower explosive limit for gases in facility structures, (excluding gas control or recovery system components); and

    b. The lower explosive limit for the gases at the property boundary.

5. If a methane gas exceedance occurs at facility structures or at the facility property boundaries, as described above, the permittee shall immediately report the exceedance to ADEQ Permits and Plan Review Unit as specified in Section 2.7.4.1.

6. The permittee shall initiate actions identified in the contingency plan contained in the original APP and the FOP to resolve any problems identified by the investigation that may have led to an LEL exceedance. To implement the corrective action the permittee shall obtain prior approval from the Director according to Section 2.6.5.

7. Upon review of the submitted report, the Director may require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.5.2.2 Facility Monitoring

1. Operational

    Perimeter channels, groundwater monitoring wells, and gas monitoring probes shall be inspected, maintained, and monitored as necessary, as referenced in TABLE 4.2.2. The perimeter fence shall be repaired and replaced as necessary. The gate shall remain locked during non-business hours. All signage shall be maintained.

2. Closure/Post-Closure

    Volunteer plant growth shall be allowed to occur spontaneously within the first several years of closure. During the period of initial plant growth, the vegetative layer shall be inspected and repaired after any rain event or excessively windy periods in accordance with the FOP.

    The landfill final cover, surface water drainage structures and erosion control features shall be inspected quarterly and after every significant rain and wind event for settlement, subsidence or erosion to ensure the integrity of the final cover and storm water management system. Should settlement occur, routine

maintenance shall be performed to restore grades in the affected areas to maintain suitable drainage on the top deck. The permittee shall perform repairs as necessary throughout the post- closure care period. All damage to wells, probes, fencing, drainage structures and the cover system shall be recorded so they can be repaired promptly and by the next inspection date**.**

2.5.3 Groundwater Monitoring and Sampling Protocols

1. Within thirty (30) days of the date of this permit, a groundwater monitoring plan compliant with 40 CFR § 257.22 shall be submitted that details the following minimum requirements:

    a. An up-gradient well shall be installed in the southeastern corner of the facility property (see Section 3.0, Compliance Schedule).

    b. Within seven (7) days of installing the new up-gradient well, the first of eight (8) rounds of quarterly groundwater monitoring shall be conducted in AW-1 and the new up-gradient well.

    c. Background groundwater quality shall be established with the submittal to ADEQ of a Type "Other" APP amendment application to set alert levels (ALs) within 60 days of completing the eighth (8^{th}) quarterly groundwater monitoring event.

    d. Thereafter, groundwater monitoring shall be conducted semiannually throughout the operational lifetime and post-closure period of RVTL in AW-1, upgradient well (to be installed), and eventually AW-2 and AW-3, as the landfill develops. Note that after the installation of AW-2 or AW-3 is completed, eight (8) quarters of groundwater monitoring shall similarly be conducted in these wells to establish ALs. The Director may allow the frequency of the post-closure monitoring program to be decreased to an annual basis.

2. Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three (3) borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80% of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the monitoring report.

2.5.3.1 POC Well Replacement

In the event that a designated POC well should become unusable or inaccessible due to damage or any other event, the well shall be repaired, or if not repairable, a replacement POC well shall be constructed and installed upon approval by ADEQ. If the replacement well is fifty (50) feet or less from the original well, the alert levels (ALs) and/or aquifer quality limits (AQLs) calculated for the designated POC well shall apply to the replacement well. Otherwise, the ALs and/or AQLs shall be recalculated and set following standard protocols.

2.5.4 Surface Water Monitoring and Sampling Protocols

Not applicable.

2.5.5 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state approved methods. If no state approved method exists, then any appropriate EPA approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona state certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, Arizona 85007-3231
Phone: (602) 364-0720

2.5.6 Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative groundwater and methane gas samples can be collected. If new groundwater or methane gas monitoring wells are determined to be necessary, the construction details shall be submitted to the ADEQ Permits and Plan Review Unit for approval prior to installation and the permit shall be amended to include any new points.

2.6 Contingency Plan Requirements [A.R.S. § 49-243(K)(3), (K)(7), and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Considerations

At least one copy of the approved contingency and emergency response plan(s) contained in the original APP and the FOP shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL that is exceeded or any violation of an AQL or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3. Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL.

The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of an AQL, or any other permit condition.

In addition to the information contained in the contingency plan referenced above, at a minimum, the following contingency requirements shall be implemented:

1. Drainage Failure

   If a drainage structure such as a channel or diversion berm fails or is blocked, action shall be taken immediately to repair the temporary structures with readily available materials to minimize erosion and/or run-off contact with waste. The temporary repairs shall be replaced by permanent repairs to be performed as soon as conditions allow. The repairs or permanent replacement of the temporary structure shall be designed to prevent future failures. Within thirty (30) days of a drainage failure, the permittee shall submit the documentation required in Section 2.7.3 of this permit.

2.6.2 Exceeding of Alert Levels

2.6.2.1 Exceeding of Alert Levels Set for Operational Conditions

Not applicable.

2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring

Not applicable.

2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1 Alert Levels for Indicator Parameters

Not applicable.

2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

Not applicable. ALs will be set upon completion of the compliance schedule items in Section 3.0.

2.6.2.3.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards

Not applicable.

2.6.3 Discharge Limitations (DL) Violations

Not applicable.

2.6.4 Aquifer Quality Limit (AQL) Violation

1. If an AQL listed in TABLES 4.1.2, 4.1.3, or 4.1.4 has been exceeded; the permittee may conduct verification sampling within five (5) days of becoming aware of an AQL being exceeded. The permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.

2. If verification sampling confirms that the AQL is violated for any parameter or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring to monthly. In addition, the permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all

discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge.

3. The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. A verified exceedance of an AQL will be considered a violation unless the permittee demonstrates within thirty (30) days that the exceedance was not caused or contributed to by pollutants discharged from the facility. Unless the permittee has demonstrated that the exceedance was not caused or contributed to by pollutants discharged from the facility, the permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.5.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.

5. The permittee shall notify any downstream or downgradient users who may be directly affected by the discharge.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. § 49-201(12) and pursuant to A.R.S. § 49-241

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances [A.R.S. § 49-201(18)] or toxic pollutants [A.R.S. § 49-243(I)] on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Emergency Response Unit at (602) 771-2300 and the ADEQ Waste Inspections and Compliance Unit within twenty-four (24) hours upon discovering the discharge of hazardous material that: (a) has the potential to cause an Aquifer Water Quality Standard (AWQS) or AQL exceedance; or (b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of nonhazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Waste Inspections and Compliance Unit within twenty-four (24) hours upon discovering the

discharge of non-hazardous material that: (a) has the potential to cause an AQL exceedance; or (b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the ADEQ Waste Inspection and Compliance Unit within thirty (30) days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, facility response activities, and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6, and actions identified in the approved contingency plan referenced in Section 5.0 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the ADEQ Permits and Plan Review Unit prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within thirty (30) days of completion of any corrective action, the permittee shall submit to the ADEQ Permits and Plan Review Unit a written report describing the causes, impacts and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements [A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self-Monitoring Report Forms (SMRF)

Not applicable.

2.7.2 Operation Inspection / Operating Record

A signed copy of this permit shall be maintained at all times at the location where decisions regarding the operation of the facility are made. An operating record (paper copies, forms or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where decisions are made regarding the operation of the facility. Facility inspections shall be conducted in accordance with TABLE 4.2.2 of this permit. The operating record shall be retained for ten (10) years from the date of each inspection and, upon request, the permit and the operating record shall be made immediately available for review by ADEQ personnel. The information in the operating record shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and time inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed; including all repair procedures and materials used;
5. Documentation of date and time for any sampling;
6. Any other information required by this permit to be entered in the operating record; and
7. Monitoring records for samples shall comply with R18-9-A206(B)(2) and R18-9-A209(C).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the ADEQ Permits and Plan Review Unit in writing within five (5) days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition or of an AL exceedance.

2. The permittee shall submit a written report to the ADEQ Permits and Plan Review Unit within thirty (30) days of becoming aware of the violation of any permit condition. The report shall document all of the following:

    a. Identification and description of the permit condition for which there has been a violation and a description of its cause;

    b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;

    c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;

    d. Any monitoring activity or other information that indicates that any pollutants would be reasonably expected to cause a violation of an AWQS if a discharge occurred;

    e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and

    f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational and Closure/Post-Closure Reporting

2.7.4.1 Methane Gas Exceedance Reporting

The following notifications are required if there is a methane gas exceedance:

1. Within twenty-four (24) hours or one (1) business day of any methane gas exceedance where the gas concentration in facility structures exceeds twenty-five percent (25%) of the lower explosive limit or gas concentrations at the landfill boundary exceed the lower explosive limit, the permittee shall notify the ADEQ Permits and Plan Review Unit.

2. Within seven (7) days of detection, the permittee shall place in the operating record a description of the steps taken to protect human health. A copy of this description shall be sent to the ADEQ Permits and Plan Review Unit.

3. Within sixty (60) days of detection of any methane gas exceedance, a remediation plan shall be implemented and a copy of the plan placed in the operating record. A copy of the plan, accompanied by a notification that the plan has been implemented, shall be sent to the ADEQ Permits and Plan Review Unit.

2.7.4.2 Operational and Closure/Post-Closure Reporting of Groundwater/Methane Monitoring and Inspections

1. The results of groundwater monitoring shall be submitted to the ADEQ Permits and Plan Review Unit in accordance with report deadlines set forth in Sections 2.7.6.1 and 2.7.6.2.

2. Methane monitoring reports shall be submitted to the ADEQ Permits and Plan Review Unit in accordance with report deadlines set forth in Sections 2.7.6.1 and 2.7.6.2.

3. At least quarterly and after every significant rain and wind event, the landfill cover, surface water drainage structures and erosion control features shall be inspected. A significant rain event shall be defined as 0.50 inches or greater of precipitation within a 24-hour period. A wind event shall be defined as greater than 25 miles per hour average wind speed over 60 minutes. All damage to wells, probes, fencing, drainage structures, etc. shall be recorded so that it can be properly repaired promptly and by the next inspection date as required in TABLE 4.2.2. Facility inspection reports covering events shall be kept in a facility file and submitted to the ADEQ Permits and Plan Review Unit in accordance with the report deadline set forth in Section 2.7.6.3.

2.7.5 Reporting Location

All documents required by this permit to be submitted to the ADEQ Permits and Plan Review Unit shall be directed to:

Arizona Department of Environmental Quality
Permits and Plan Review Unit
Waste Programs Division
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4123

2.7.6 Reporting Deadline

2.7.6.1 The following table lists the report due dates during the operational period and closure/post closure period for groundwater and methane gas monitoring events:

Monitoring conducted during quarter ending:	Operational Period Semiannual report due by:	Closure/Post Closure Period Annual report due by:
March 31	July 31	January 31
June 30		
September 30	January 31	
December 31		

2.7.6.2 Groundwater and methane gas monitoring reports for the closure/post closure period shall be submitted annually and shall be received by January 31 of each year reporting on the monitoring events of the prior year unless otherwise specified in this permit.

2.7.6.3 Reports on any repairs shall be submitted annually and shall be received by January 31 of each year reporting on repair events of the prior year.

2.7.7 Changes to Facility Information in Section 1.1

The ADEQ Permits and Plan Review Unit shall be notified within ten (10) days of any change of facility information including the facility name, permittee as owner or operator, mailing address, facility/emergency contact person, or contact telephone numbers.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the ADEQ Permits and Plan Review Unit before ceasing operation of the facility for a period of sixty (60) days or greater.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ's approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the ADEQ Permits and Plan Review Unit of the operational status of the facility every three (3) years. When the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252, and A.A.C. R18-9-A209(B)]

The permittee shall give written notice of closure to the ADEQ Permits and Plan Review Unit of the permittee's intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within ninety (90) days following notification of closure, the permittee shall submit for approval to the ADEQ Permits and Plan Review Unit, a revised Closure Plan, stating any changes to the SASWFP, if applicable, which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B) and 40 CFR Part 257.

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the ADEQ Permits and Plan Review Unit indicating that the approved Closure Plan has been implemented fully. The permittee shall submit a CQA/CQC report, signed by an independent Arizona registered professional engineer, verifying that closure has been completed in accordance with the design drawings in the SASWFP, the *Quality Assurance Manual for Construction of Alternative Final Cover and Liner Systems* (EMCON, 1999), and any updates required under Section 2.9.1. In addition, the permittee shall submit a recorded copy of all property deeds demonstrating the inclusion of complete information describing the material buried or discharged at the facility and any limitations on future land or water uses created as a result of the facility's operations or closure activities.

Upon approval of the CQA/CQC report, ADEQ shall issue a letter of official closure acknowledgement to the permittee. The permittee shall then follow the terms of post-closure stated in this permit.

2.10 Post-Closure [A.R.S. §§ 49-243(K)(6), 49-252, and A.A.C. R18-9-A209(C)]

2.10.1 Post-Closure Plan

The Post-Closure Plan includes all monitoring and maintenance activities as outlined in A.A.C. R18-9-A209(C)(1) and the approved SASWFP and shall ensure that any reasonable probability both of future discharge from the facility and of exceeding an AWQS at the applicable point of compliance are eliminated to the greatest extent practicable.

Post-closure care shall be provided at RVTL for thirty (30) years from the date of final closure acknowledgment by ADEQ, and shall consist of:

1. Maintaining the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of differential settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.

2. Maintaining the effectiveness and integrity of the storm water management system. The program shall include a schedule to inspect all storm water management structures pursuant to along with measures to repair storm water structures as necessary throughout the post-closure care period.

3. Maintaining and operating the gas monitoring system in accordance with the requirements of 40 CFR § 257.3–8.

4. Maintaining and operating the groundwater monitoring wells.

5. The permittee shall control public access in accordance with the FOP referenced in Section 5.0.

6. The permittee shall comply with the recordkeeping requirements specified in Section 2.7 of this permit.

7. The permittee shall provide and maintain financial assurance for the costs associated with post-closure maintenance and any necessary corrective action as a result of known releases from the landfill facility in accordance with Section 6.5 of this permit.

The post-closure period may be modified by the Department to ensure protection of human health and the environment.

2.10.2 Post-Closure Completion

The permittee shall notify ADEQ in writing within thirty (30) calendar days of completion of all post-closure care activities. The written notice shall include a certification, signed by an independent Arizona registered professional engineer hired by the permittee, verifying that post-closure care has been completed in accordance with the approved post-closure care plan.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Within thirty (30) days of the date of this permit, a groundwater monitoring plan compliant with 40 CFR § 257.22 shall be submitted that details the following minimum requirements:

1. An up-gradient well shall be installed in the southeastern corner of the facility property.

2. Within seven (7) days of installing the new up-gradient well, the first of eight (8) rounds of quarterly groundwater monitoring shall be conducted in AW-1 and the new up-gradient well.

3. Background groundwater quality shall be established with the submittal to ADEQ of a Type "Other" APP amendment application to set alert levels (ALs) within 60 days of completing the eighth (8^{th}) quarterly groundwater monitoring event.

4. Thereafter, groundwater monitoring shall be conducted semiannually throughout the operational lifetime and post-closure period of RVTL in AW-1, upgradient well (to be installed), and eventually AW-2 and AW-3, as the landfill develops. Note that after the installation of AW-2 or AW-3 is completed, eight (8) quarters of groundwater monitoring shall similarly be conducted in these wells to establish ALs. The Director may allow the frequency of the post-closure monitoring program to be decreased to an annual basis.

5. Within one hundred eighty (180) days following the issuance of the permit, the permittee shall provide the estimated quantity of soil available for the final cover located in the soil stockpile area shown on *Drawing 2* of the *8/4/2015 Addendum No. 4.* The permittee shall demonstrate that it is sufficient to supple the final cover.

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 GROUNDWATER MONITORING

TABLE 4.1.1 SAMPLING LOCATIONS

POC Location	Latitude	Longitude	Status
AW-1	**33° 05' 26"**	**112° 16' 46"**	**Existing Well**
Up-gradient Well	**TBD**	**TBD**	**Compliance Schedule Item**
AW-2	**33° 05' 44"**	**112° 16' 46"**	**Approved location for future well**
AW-3	**33° 06' 02"**	**112° 16' 46"**	**Approved location for future well**

TABLE 4.1.2 GENERAL PARAMETERS

Parameter	Aquifer Quality Limit [1] (mg/l)	Alert Level [2] (mg/l)	Analytical Method [3]	Sampling Frequency	Reporting Frequency
Temperature	N/E	N/A	EPA 170.1	Semiannual	Semiannual
Specific Conductance	N/E	N/A	EPA 120.6	Semiannual	Semiannual
pH	N/E	N/A	EPA 150.1	Semiannual	Semiannual
Total Dissolved Solids	N/E	N/A	SM 2540	Semiannual	Semiannual
Calcium	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Manganese	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Potassium	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Sodium	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Alkalinity, total	N/E	N/A	SM 2320	Semiannual	Semiannual
Chloride	N/E	N/A	EPA 300.0	Semiannual	Semiannual
Fluoride	4.0	Reserved	EPA 300.0	Semiannual	Semiannual
Sulfate	N/E	N/A	EPA 300.0	Semiannual	Semiannual
Nitrate (as N)	10	Reserved	EPA 300.0	Semiannual	Semiannual

[1] N/E - Not established in rule.

[2] N/A – Not Applicable. “Reserved” means that Alert Levels (AL) will be set once eight (8) quarters of monitoring data is completed.

[3] The permittee shall use only EPA approved methods unless ADEQ authorizes the use of another method. The permittee may substitute any EPA approved method for any other, if the substituted method provides detection limits that are equal to or lower than the limits of the originally approved method. All laboratory analyses shall have detection limits that are adequate for detection of the regulatory limits of the parameter in question. ADEQ reserves the right to determine the adequacy of the laboratory results based on the detection limits used.

TABLE 4.1.3 INORGANICS

Parameter	Aquifer Quality Limit[1] (mg/l)	Alert Level[2] (mg/l)	Analytical Method [3]	Sampling Frequency	Reporting Frequency
Arsenic	0.05	Reserved	EPA 200.7	Semiannual	Semiannual
Barium	2.0	Reserved	EPA 200.7	Semiannual	Semiannual
Cadmium	0.005	Reserved	EPA 200.7	Semiannual	Semiannual
Chromium	0.1	Reserved	EPA 200.7	Semiannual	Semiannual
Iron	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Lead	0.05	Reserved	EPA 200.7	Semiannual	Semiannual
Mercury	0.002	Reserved	EPA 200.7	Semiannual	Semiannual
Selenium	0.05	Reserved	EPA 200.7	Semiannual	Semiannual
Silver	N/E	N/A	EPA 200.7	Semiannual	Semiannual
Zinc	N/E	N/A	EPA 200.7	Semiannual	Semiannual

TABLE 4.1.4 VOLATILE ORGANICS

Parameter	Aquifer Quality Limit[1] (mg/l)	Alert Level[2] (mg/l)	Analytical Method [3]	Sampling Frequency	Reporting Frequency
Benzene	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Bromobenzene	N/E	N/A	EPA 8260	Semiannual	Semiannual
Bromochloromethane	N/E	N/A	EPA 8260	Semiannual	Semiannual
Bromodichloromethane (Total Trihalomethanes TTHMs)	0.100	Reserved	EPA 8260	Semiannual	Semiannual
Bromoform (Total Trihalomethanes TTHMs)	0.100	Reserved	EPA 8260	Semiannual	Semiannual
Bromomethane	N/E	N/A	EPA 8260	Semiannual	Semiannual
Carbon Tetrachloride	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Chlorobenzene	0.100	Reserved	EPA 8260	Semiannual	Semiannual
Chloroethane; Ethyl Chloride	N/E	N/A	EPA 8260	Semiannual	Semiannual
Chloroform (Total Trihalomethanes TTHMs)	0.100	Reserved	EPA 8260	Semiannual	Semiannual
Chloromethane	N/E	N/A	EPA 8260	Semiannual	Semiannual
Dibromochloromethane (Total Trihalomethanes TTHMs)	0.100	Reserved	EPA 8260	Semiannual	Semiannual
o-Dichlorobenzene; 1,2-Dichlorobenzene	0.6	Reserved	EPA 8260	Semiannual	Semiannual
m-Dichlorobenzene; 1,3-Dichlorobenzene	N/E	N/A	EPA 8260	Semiannual	Semiannual
p-Dichlorobenzene; 1,4-Dichlorobenzene	0.075	Reserved	EPA 8260	Semiannual	Semiannual
1,1-Dichloroethane; Ethylidene chloride	N/E	N/A	EPA 8260	Semiannual	Semiannual
1,2-Dichloroethane; Ethylene dichloride	0.005	Reserved	EPA 8260	Semiannual	Semiannual
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	0.007	Reserved	EPA 8260	Semiannual	Semiannual
1,2-Dichloropropane; Propylene dichloride	0.005	Reserved	EPA 8260	Semiannual	Semiannual
cis-1,3-Dichloropropene	N/E	N/A	EPA 8260	Semiannual	Semiannual
trans-1,2-Dichloroethene; 1,2-Dichloroethylene; 1,2-DCE	0.1	Reserved	EPA 8260	Semiannual	Semiannual
trans-1,3-Dichloropropene	N/E	N/A	EPA 8260	Semiannual	Semiannual
Dichloromethane; Methylene Chloride	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Ethylbenzene	0.7	Reserved	EPA 8260	Semiannual	Semiannual
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Toluene	1	Reserved	EPA 8260	Semiannual	Semiannual
1,1,2,2-Tetrachloroethane	N/E	N/A	EPA 8260	Semiannual	Semiannual
1,1,1-Trichloroethane; Methylchloroform	0.20	Reserved	EPA 8260	Semiannual	Semiannual
1,1,2-Trichloroethane	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Trichloroethylene; Trichloroethene	0.005	Reserved	EPA 8260	Semiannual	Semiannual
Vinyl Chloride	0.002	Reserved	EPA 8260	Semiannual	Semiannual

4.2 COMPLIANCE MONITORING

TABLE 4.2.1 METHANE GAS MONITORING

Specific Reference	Frequency[4]
Section 2.5.2	Quarterly

[4] Post-closure monitoring frequency may be reduced to semiannually or annually based upon a demonstration to ADEQ that the reduced frequency is sufficient to protect human health and the environment.

TABLE 4.2.2 FACILITY INSPECTIONS - OPERATIONAL

Parameter	Performance Level	Inspection Frequency[4]
Perimeter channels and berms	No visible erosion that would affect the integrity of the structure, no evidence of seepage, cracking, piping, sloughing, or sliding.	Quarterly and after every significant rain and wind event[5]
Drainage control structure (down drain structures and riprap channels) integrity	No visible erosion that would affect the integrity of the structure, no evidence of seepage, cracking, piping, sloughing, or sliding.	Quarterly and after every significant rain and wind event[5]
Operating area ponding due to rainfall event	Operating area graded to minimize the amount of standing water.	After every significant rain event [5]
Public access control	Repair and replacement, as necessary, of fence and maintenance of no trespassing signs. Locked gate during non- business hours. Maintenance of all signage.	Quarterly and as needed basis
Gas monitoring probe and groundwater monitoring well integrity and operability	No visible evidence of damage or loss of operability.	Quarterly

[4] Post-closure inspection frequency may be reduced to semiannually or annually based upon a demonstration to ADEQ that the reduced frequency is sufficient to protect human health and the environment.

[5] A significant rain event shall be defined as 0.50 inches or greater of precipitation within a 24-hour period. A wind event shall be defined as greater than 25 miles per hour average wind speed over 60 minutes.

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. *Application for Aquifer Protection Permit (Part I), Discretionary Information (Part II),* and *Facility Operations Plan (Book 1 of 3), Rainbow Valley Topsoil and Landfill,* by Scott, Allard, and Bohannan, Inc., dated July 25, 1994.

2. *Appendix to Application for Aquifer Protection Permit (Part I), Discretionary Information (Part II), Rainbow Valley Topsoil and Landfill*, by Stanley Consultants, dated July 25, 1994.

3. *Addendum to Aquifer Protection Permit Application (Part I), Discretionary Information (Part II), and Facility Operations Plan, Rainbow Valley Topsoil and Landfill,* by Scott, Allard, & Bohannan, Inc., dated November 16, 1994.

4. *Aquifer Protection Permit No. P-102800 and Facility Plan Approval (Initial Approval to Construct and Operate Rainbow Valley Topsoil and Landfill),* dated August 24, 1995.

5. *Proposal for Waste Tire Monofill, Rainbow Valley Landfill,* by Glenn Weinberger, dated April 29, 1997.

6. *Proposal for Waste Tire Monofill, Slope Stability Analysis, Rainbow Valley Landfill,* by EMCON, dated June 16, 1997.

7. *Addendum to Tire Monofill Application, Rainbow Valley Landfill,* by Glenn Weinberger, Inc., dated June 16, 1997.

8. *Rainbow Valley Landfill, Aquifer Protection Permit P-102800, Tire Monofill Modification Approval,* dated June 26, 1997.

9. *Tire Monofill, Rainbow Valley Topsoil and Landfill,* by Glenn Weinberger, Inc., dated August 8, 1997.

10. *Rainbow Valley Landfill, Aquifer Protection Permit P-102800, Additional PCTABL5 Modeling for Waste Tire Monofill,* by EMCON, dated August 19, 1997.

11. *Approval of Truck Tire Bead Disposal at the Rainbow Valley Landfill,* dated September 5, 1997.

12. *Aquifer Protection Permit No. P-102800 and Facility Plan Approval, revised pages 2 and 24, (Tire Monofill),* dated October 16, 1997.

13. *Aquifer Protection Permit No. P-102800 and Facility Plan Approval, revised page 1, (Name Change to Glenn Weinberger Topsoil, Inc.),* dated March 25, 1999.

14. *Request for Minor Modification, Equivalency Demonstration for Alternative Final Cover and Bottom Liner Systems, Rainbow Valley Topsoil and Landfill,* by EMCON, dated March 31, 1999.

15. *Facility Operations Plan, Rainbow Valley Topsoil and Landfill,* by Scott, Allard, & Bohannan, Inc., dated May 18, 1999.

16. *Aquifer Protection Permit No. 102800, revised pages 1, 2, 3, 13, 24, and Table 1, (Approval of Alternative Final Cover and Bottom Liner Systems and the Quality Assurance/Quality Control Plan for Construction of the Final Cover and Bottom Liner System),* dated May 19, 1999.

17. *Notification to Accept Non-Regulated Asbestos Containing Waste Materials, Rainbow Valley Landfill,* dated January 25, 2001, by AMMTEC Consulting, Inc.

18. *Request for Type III Modification, Groundwater Monitoring Suspension, Rainbow Valley Landfill,* by AMMTEC Consulting, Inc., dated September 10, 2001.

19. *Aquifer Protection Permit No. 102800 and Municipal Solid Waste Facility Plan Approval No. 07000700.01 (Groundwater Monitoring Suspension),* dated October 29, 2001.

20. *Approval of Whole Forklift Tire Acceptance at Rainbow Valley Landfill (Waste Tire Monofill Clarification),* dated September 3, 2003.

21. *Request for Type II Modification, Notification for the Acceptance of Forklift Tires, Rainbow Valley Landfill,* by AMMTEC Consulting, Inc., dated September 19, 2003.

22. *Clarification of Type II Modification Request, Notification for the Acceptance of Waste Tires, Rainbow Valley Landfill, Solid Waste Facility Plan/Aquifer Protection Permit,* by AMMTEC Consulting, Inc., dated September 22, 2003.

23. *Approval of Waste Tire Acceptance at Rainbow Valley Landfill (Waste Tire Monofill Clarification),* dated October 1, 2003.

24. *Request for Other Modification to Incorporate 3:1 Side Slopes and for Acceptance of Waste Soils, Rainbow Valley Topsoil and Landfill,* AMMTEC Consulting, Inc., dated March 12, 2004.

25. *Approval of Steeper Side Slope from 4:1 to 3:1 and Acceptance of Petroleum Impacted Soils below Non-Residential Levels and Other Non-Regulated Soils,* dated April 6, 2004.

26. *Request for the Acceptance of Un-Recyclable Shredded or Chopped Tires at the Rainbow Valley Landfill,* by Glenn Weinberger, Inc., dated November 15, 2004.

27. *Request for Other Modification for the Acceptance of Un-Recyclable Shredded or Chopped Tires at the Rainbow Valley Landfill, Glenn Weinberger, Inc., Maricopa County, AZ,* by AMTECH Associates, LLC, dated May 2, 2005.

28. *Request for "Other" Type Permit Amendment for the Rainbow Valley Non-Municipal Landfill Aquifer Protection Permit # P-103697 (Waste Tire Monofill Clarification),* dated August 2, 2005.

29. *Significant Amendment, Solid Waste Facility Plan, Aquifer Protection Permit No. P-102800, Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Maricopa County, Arizona*, by AMTECH Associates, L.L.C., dated August 28, 2014.

30. *Supplement to the Significant Amendment Application, Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Arizona, APP No. P-102800,* by AMTECH Associates, L.L.C., dated October 16, 2014.

31. *Addendum to Significant Amendment Application to the Solid Waste Facility Plan/Aquifer Protection Permit No. P-102800, Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Arizona,* by AMTECH Associates, L.L.C., dated December 1, 2014.

32. *Addendum No. 2, Response to Comments, Significant Amendment to Solid Waste Facility Plan/Aquifer Protection Permit No. P-102800 for the Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Arizona,* by AMTECH Associates, L.L.C., dated February 17, 2015.

33. *Addendum No. 3, Response to Comments, Significant Amendment to Solid Waste Facility Plan/Aquifer Protection Permit for the Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Arizona, LTF ID: 61150 [Reference: APP/SWFP No. P-102800],* by AMTECH Associates, L.L.C., dated April 24, 2015.

34. *Addendum No. 4, Response to Notice of Deficiency, Significant Amendment to Solid Waste Facility Plan/Aquifer Protection Permit for the Rainbow Valley Topsoil and Landfill, Glenn Weinberger Topsoil, Inc., Mobile, Arizona, LTF ID: 61150 [Reference: APP/SWFP No. P-102800]*, by AMTECH Associates, L.L.C., dated August 4, 2015.

35. *Aquifer Protection Permit No. P-102800.01,* dated XXXXX, 2015, incorporating a lateral and vertical expansion.

6.0 GENERAL CONDITIONS AND RESPONSIBILITIES

6.1 Annual Registration Fees [A.R.S. §§ 49-747(C), 49-836]

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ as referenced in Section 2.1.1 of this permit.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 49-263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2, and 3 of the Arizona Revised Statutes and Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to provide information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information that the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application pursuant to A.A.C. R18-9-A203(D) shall remain in effect for the duration of the permit.

6.5.1 Periodic Update of Post-Closure Cost Estimate [A.R.S. § 49-243(N)(2)(a)]

For the duration of the permit, the cost estimate shall be updated every five (5) years to adjust for inflation or as necessary to reflect increased costs resulting from changes to the facility or to the facility closure strategy or plan, or to any other relevant conditions related to the facility.

6.5.2 Periodic Demonstration of Responsibility and Reporting [A.R.S. § 49-243(N)(4)]

The permittee shall maintain its demonstration of financial responsibility prescribed in this subsection for the duration of the permit. The permittee shall demonstrate financial responsibility by reporting the status of the financial assurance mechanism with documentation every five (5) years.

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee.
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7 Monitoring and Records [A.R.S. §§ 49-243(K)(8) and A.A.C. R18-9-A206 and A209(C)]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit and with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 Inspection and Entry [A.R.S. §§ 49-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. **§§** 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices specified by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension & Revocation [A.R.S. §§ 49-through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, renewed or revoked for cause, under the rules of the Department.

The permittee shall notify the ADEQ Permits and Plan Review Unit in writing within fifteen (15) days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2 Severability [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer will be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

END OF AQUIFER PROTECTION PERMIT NO. P-102800.01